

August 29, 2007

***Via Hand Delivery***

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, DC 20554

FILED/ACCEPTED

AUG 29 2007

Federal Communications Commission  
Office of the Secretary

**Re: MDS Operations, Inc.  
Supplement to Petition for Waiver to Increase Effective Isotropic Radiated  
Power Limitations Applicable to Multichannel Video Distribution and Data  
Service Stations WQAR560, *et al.***

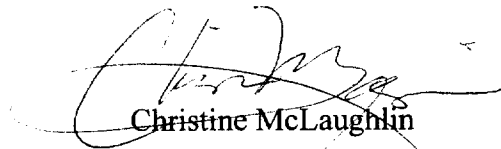
Dear Ms. Dortch:

Transmitted herewith, on behalf of MDS Operations, Inc., please find the original and four (4) copies of the above-referenced Supplement to its Petition for Waiver, which was filed with the Commission on May 7, 2007. Attached to the Supplement, please also find a corrected version of the Petition for Waiver.

Enclosed please also find an extra copy of the Supplement. Kindly date-stamp that copy and return it to our courier, who is waiting.

If you have any questions or require additional information concerning this matter, kindly contact the undersigned.

Sincerely,



Christine McLaughlin

Enclos.

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**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

**FILED/ACCEPTED**  
**AUG 29 2007**  
Federal Communications Commission  
Office of the Secretary

In the Matter of	)	
	)	
MDS OPERATIONS, INC.	)	File No. _____
	)	
Petition for Waiver to Increase Effective	)	
Isotropic Radiated Power Limitations	)	EXPEDITED ACTION
Applicable to Multichannel Video Distribution	)	REQUESTED
and Data Service Stations WQAR560, <i>et al.</i>	)	

To: Chief, Wireless Telecommunications Bureau

**SUPPLEMENT TO PETITION  
FOR RULE WAIVER**

MDS Operations, Inc. ("MDSO") hereby submits this Supplement to clarify or correct certain statements in its above-captioned Petition for Rule Waiver, filed on May 7, 2007 (the "Petition") and to provide additional analysis in response to questions raised by the Broadband Division during a recent meeting with MDSO and its advisors. The Petition requests a waiver of certain Commission Rules governing Multichannel Video Distribution and Data Service ("MVDDS") stations to permit MDSO to construct systems with a higher EIRP than permitted under the Rules. A corrected version of the Petition, which is marked as such, is being submitted concurrently herewith.<sup>1</sup>

**I. Corrections and Clarifications.**

The Petition should be deemed corrected to read as follows:

- At page 2,<sup>2</sup> first line on the page, "40 dBm" should read "40 dBm per 24 MHz of spectrum".

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<sup>1</sup> Due to its size, Exhibit One is not being included with the corrected Petition.

<sup>2</sup> Page number references are to the original Petition.

- At page 2, in footnote 2, “44 dBm” should read “44 dBm per 24 MHz of spectrum”.
- At page 5, eighth line from the bottom of the page, replace “more than three times” with “power levels well above”.
- At page 8, fourth line of the first full paragraph, “30 dBm” should read “30 dBm per 24 MHz of spectrum”.
- At page 9, first line on the page, “14 dBm” should read “14 dBm per 24 MHz of spectrum”.
- At page 9, third line on the page, “44 dBm” should read “44 dBm per 24 MHz of spectrum”.

Moreover, although MDSO requested a waiver of the equivalent power flux density (“EPFD”) limitations of 47 C.F.R. §101.105(a)(4), it did so only out of an abundance of caution. As demonstrated in Exhibit One to the Petition, even at the highest Effective Isotropic Radiated Power (“EIRP”) tested by MDSO, MDSO’s system design complied with the EPFD limits at DBS receivers. *See*, Analytic Consulting Services, Inc., “Albuquerque MVDDS Test Report” (January 9, 2007) (the “Report”), attached to the Petition as Exhibit One, at 35. Consequently, MDSO does not expect that the EPFD limits of Section 101.105(a)(4) will be exceeded in most cases.

Finally, it should be clarified that, to date, no applications for modification of the subject MVDDS licenses have been filed. The Petition and accompanying technical exhibit were too large to successfully upload and were filed manually following discussions with the Commission’s staff; modification applications will be filed if requested upon further instruction from the Commission.

## **II. It is Appropriate to Proceed by Waiver.**

The Commission’s staff have inquired as to whether it would be appropriate to handle MDSO’s request as a rule waiver rather than a rulemaking proceeding.

In its MVDDS rulemaking docket, the Commission itself already decided the proper procedure for MDSO's request. In the order that adopted the MVDDS technical rules, the Commission stated its intention to promote "flexible use of the spectrum" by allowing MVDDS licensees might wish to operate at variance from those rules, and described the procedure for licensees to follow:

"We clarify that MVDDS applicants are not limited to using technology that complies with the operating parameters adopted here. However, *any entity seeking to employ a terrestrial service technology that does not comply with our technical rules must file a waiver petition*, on which public comment will be sought. As part of the waiver process, the entity must submit an independent technical demonstration of its equipment and technology. We find that this process is in furtherance of the Communications Act and consistent with the requirements of the LOCAL TV Act's Section 1012(a), as discussed above. While we are mindful of the need to protect current and future entities from harmful interference within the band, we seek to allow flexible use of the spectrum and, as such, do not wish to limit current and future technological innovations. We find that the independent testing requirement will balance these competing interests for terrestrial wireless technologies that do not comply with the technical rules."

*Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range; Amendment of the Commission's Rules to Authorize Subsidiary Terrestrial Use of the 12.2-12.7GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates; and Applications of Broadwave USA, PDC Broadband Corporation, and Satellite Receivers, Ltd. to Provide A Fixed Service in the 12.2-12.7GHz Band, Memorandum Opinion and Order and Second Report and Order*, 17 FCC Rcd. 9614, 9704 (2002) ("*Second R&O*") (emphasis added). "Terrestrial service technology" was intended to mean "the operating parameters for MVDDS licensees . . . codified by this Order," including the power limitations adopted therein. *Id.* at 9703-04. On reconsideration, in upholding the EIRP and EPFD limits adopted in the *Second R&O*, the Commission again stated that "MVDDS providers may file petitions for waiver of the general

MVDDS limits adopted in the *Second R&O.*” *Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range; Amendment of the Commission's Rules to Authorize Subsidiary Terrestrial Use of the 12.2-12.7GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates; and Applications of Broadwave USA, PDC Broadband Corporation, and Satellite Receivers, Ltd. to Provide a Fixed Service in the 12.2-12.7GHz Band*, Fourth Memorandum Opinion and Order, 18 FCC Rcd. 8428, 8469 (2003) (“*Fourth MO&O*”).

The Commission has previously used waivers to encourage the deployment of new technologies, including proposals far more aggressive than anything sought in the Petition. For example, the Commission used a waiver proceeding to permit Hye Crest Management, Inc. (“Hye Crest”) to operate a new video service on 28 GHz frequencies then allocated for point-to-point microwave operation, in New York City. *Hye Crest Management, Inc.*, 6 FCC Rcd. 332 (1991). The Commission found that proceeding by adjudication rather than rulemaking was warranted because it had a statutory obligation to “encourage the provision of new technologies’ in communications services offered to the public” and “the waiver approach offers the most efficient and expeditious means available” to do so. *Id.* at 334. The Commission went on to cite other cases in which it proceeded by waiver to authorize operation on frequencies for services for which they were not allocated. *Id.* Moreover, the Commission found no harm to the authorized users of the 28 GHz band, relying on the availability of other frequencies and of engineering techniques that could increase capacity on the remaining bands. *Id.* On balance, the Commission found that:

“Hye Crest has demonstrated that its proposal will facilitate the introduction of a novel and innovative use of previously unused spectrum. That spectrum would be used to bring a new and needed multichannel video service to the New York City market in competition with cable television and other video delivery and

distribution services, with no foreseeable harm to the 28 GHz band's assigned users."

*Id.*

The relief sought by MDSO's Petition is in no way as sweeping as that granted to Hye Crest. MDSO's far more modest proposal simply seeks to operate at variance with certain technical rules in order to more efficiently and rapidly deploy the service for which the frequencies in question have been allocated. MDSO has already been licensed through the Commission's auction process, at a cost of more than four million dollars in net high bids,<sup>3</sup> and has evidently made a significant financial commitment toward the deployment of this new technology in previously unserved areas.

Many of the public interest benefits supporting the Hye Crest waiver weigh in favor of MDSO's Petition. MVDDS was allocated to permit efficient use of the subject spectrum and to provide for novel services, including broadband and video, *Second R&O*, 17 FCC Rcd. at 9617; and the Commission noted the public interest benefits of a "new potential competitor in the multichannel video and data markets." *Id.* at 9634. The development and encouragement of advanced, efficient communications services to the public of course remain among the Commission's core statutory mandates. *See*, 47 U.S.C. §§ 151, 303(g); 309(j)(3)(A), (D). The Commission has often observed the statutory and regulatory policies in favor of promoting the introduction of broadband services. *See e.g.*, *Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks*, 22 FCC Rcd 5901, ¶ 27 (2007); *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*, 20 FCC Rcd 14853, ¶ 8 (2005); *Local Competition and Broadband Reporting*, 15 FCC Rcd 926, ¶¶ 2-3 (2000). Yet, more than three years after the first MVDDS stations were licensed, MDSO is not aware of a

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<sup>3</sup> *See* <http://wireless.fcc.gov/auctions/53/charts/53market.xls> and <http://wireless.fcc.gov/auctions/63/charts/63bidder.xls>.

single operating system in the United States. To date, MDSO is (to the best of its knowledge) the sole licensee who has tested MVDDS operations, and it is ready, willing and able to commence the deployment of its MVDDS networks. That deployment, especially to the smaller communities in MDSO's eighty Designated Market Areas ("DMAs"), would be greatly accelerated if MDSO could operate at higher power. MDSO has provided the Commission with evidence that it can do so while still causing no interference to DBS.

MDSO's affiliate submitted evidence in its comments in the MVDDS rulemaking that MVDDS operation at higher EIRP without interference was feasible,<sup>4</sup> and the Commission itself recognized that the power levels it ultimately adopted were "very conservative."<sup>5</sup> Nonetheless, MDSO's Petition does not challenge the underlying rules. *See e.g., KCST-TV, Inc. v. FCC*, 699 F.2d 1185, n. 21 (D.C. Cir. 1983), *citing WAIT Radio v. FCC*, 418 F.2d 1153, 1158 (D.C. Cir. 1969) (waiver request presupposes the validity of existing rule). There may be equipment models and system designs for which the strict limitations imposed by the Commission's rules are necessary or advisable.

The Petition expressly relies on MDSO's use of the equipment and system design techniques of its affiliate MDSA.<sup>6</sup> Other licensees who employ similar network designs would be entitled to comparable treatment. MDSO renders no opinion as to any other equipment or technical configuration which could be used by an MVDDS licensee, nor does its Petition ask the Commission to decide whether any such other equipment or configuration would be suitable for higher-powered operation. MDSO's Petition demonstrates that, based upon the specific

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<sup>4</sup> *See e.g.,* MDS America, Inc., Petition for Reconsideration in ET Docket No. 98-206 (filed June 24, 2002).

<sup>5</sup> *Second R&O*, 17 FCC Rcd. at 9642.

<sup>6</sup> While other MVDDS licensees have expressed interest in using MDSA's equipment and technical services, MDSO cannot say how many of them, if any, will actually do so.

technical design described in its Report, its MVDDS systems may safely operate at higher EIRP limits than those provided for under the Commission's rules.

MDSO is not proposing any operations at odds with the type of service authorized by the Commission's MVDDS rules. *Cf.*, *AirCell, Inc.*, 14 FCC Rcd. 806, ¶ 20 (Wir. Tel. Bur. 1998) (granting waiver of ban on cellular use in airplanes, noting that request did not propose an entirely new type of service, but an "alternate mode" of providing services on their existing allocation). Indeed, the Commission specifically invited showings such as that presented by MDSO in the MVDDS rulemaking docket. *See Second R&O* ¶ 236, n. 573 MDSO is not asking the Commission to establish "absolute standards of general, prospective applicability" to all MVDDS systems; it is therefore appropriate for the Commission to proceed through an adjudicatory waiver proceeding. *See, e.g., Broadcast Corporation of Georgia (WVEU-TV), Atlanta, Georgia; For Authority to Resume Full Power Operation*, 96 FCC 2d 901, ¶¶14-15 (1984) (discussing characteristics of adjudicatory v. rulemaking proceedings in connection with settlement of interference issue); *see also AirCell, Inc., supra*, at ¶ 20 (waiver applies only to the system proposed; any other proposals would need to be evaluated on their own merits).

The Commission has previously found that waivers of its technical rules are appropriate to permit the rapid deployment of advanced or improved service offerings. For example, in *AirCell, Inc.*, the Commission granted a waiver to permit the deployment of mobile terminals that would allow for cellular telephone use aboard aircraft in flight, over existing cellular licenses. The Commission noted its mandate "to promote the efficient use of spectrum resource, as well as to promote new technologies and make available new services to the public," and found that the AirCell system would further that mandate by "generat[ing] alternate service offerings for cellular licensees" and benefiting consumers. 14 FCC Rcd. 806, ¶ 17.



Similarly, the Commission has previously waived its Part 68 rules limiting the power of out-of-band signals to allow the introduction of a product that allowed concurrent Internet access and voice communications over a single telephone line. *Paradyne Corporation*, 14 FCC Rcd. 4496 (Com. Car. Bur. 1999). The Commission there found that Paradyne's proposed offering would serve the public interest "increased consumer choice and value" by allowing for high-speed digital transmission without a separate line. *Id.* at ¶ 11. The Commission also relied on Paradyne's compliance with particular technical standards as assurance that a waiver would not cause harm to the public switched network. *Id.* at ¶ 18.

Similar to the cases in which the Commission has approved waivers to its technical rules, MDSO here proposes to more rapidly deploy advanced services (in MDSO's case, high-speed, digital broadband data) than would otherwise be feasible without this rule waiver. MDSO's proposal would allow for the more rapid deployment of broadband services than is possible under the existing rules, but requires only the waiver of a few aspects of the Commission's rules. As discussed in greater detail in the Petition and below, MDSO's proposed technical configuration is uniquely suited to speed deployment to rural and other small-market communities, and it will cause no harm to any other party.

### **III. No Harmful Interference Will Result from a Grant of the Waiver.**

As demonstrated in the Report, MDSO's equipment and system design allow for more efficient, interference-free operations, at higher power levels. Moreover, as clarified above, even with the higher EIRP levels proposed by MDSO, it is anticipated that the EPFD limits in the Commission's rules will be met virtually all of the time. DBS customers will be fully protected by MDSO's operations. Indeed, because MDSO's design can provide coverage to a wide area

from a single, higher powered site, it does not need to place multiple, low-powered transmitters in populated locations where they would be more likely to interfere with DBS receive dishes.

As the Report explains in detail, operations at even higher EIRP levels than are requested in the Petition resulted in *no* harmful interference to DBS signals. MDSO is mindful of the Commission's concern for DBS viewers, as well as its statutory obligation to ensure that those viewers are not subjected to "harmful interference."<sup>7</sup> However, as the Commission held in the *Second R&O*, "harmful interference" does not include outages – let alone the mere presence of a secondary signal – so limited that viewers do not even notice it. *See Second R&O*, 17 FCC Rcd. at 9642-43. The U.S. Court of Appeals for the D.C. Circuit upheld that approach to determining whether MVDDS could be deemed to interfere with DBS, finding it reasonable. *Northpoint Technology, Ltd. v. FCC*, 414 F.3d 61 (D.C. Cir. 2005). Chairman Martin's partial dissent from the *Second R&O* expressed concerns that the majority's decisions might impact DBS availability more than 10% above the established baseline, but, he did not question the traditional definition of "harmful interference" as "interference which 'seriously degrades, obstructs or repeatedly interrupts'" service. *See* 17 FCC Rcd. at 9814-15.

MDSO's Petition is entirely consistent with the Commission's approach in the *Second R&O*, and with the Chairman's concerns about the impact of the MVDDS technical rules upon DBS. Simply put, a grant of MDSO's requested waiver will result in *no* perceivable "degrade[ation], obstruct[ion] or . . . interrupt[ion]" of DBS reception. The field studies described in the Report intentionally created worst-case scenarios in a real-world environment, Report at 13-14, 19; and, in no case was the result an interfering MVDDS signal that would

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<sup>7</sup> See Section 2002(b)(2) of the Rural Local Broadcast Signal Act ("RLBSA"), Title II of S. 1948, the Intellectual Property and Communications Omnibus Reform Act of 1999, Appendix I to Pub. L. 106-113. *See also, Second R&O* at ¶ 26 (referring to the "stringent" rules adopted ensuring impact on DBS "would not likely approach a level that could be considered harmful interference"); Separate Statement of Chairman Kevin Martin Dissenting in Part and Approving in Part, 17 FCC Rcd at 9813, *et seq.*

likely be noticeable to a viewer of DBS service. *Id.* at 26, 30. Not once during these studies did any DBS licensee or subscriber anywhere in the Albuquerque service area complain of interference or degradation of service. *Id.* at 35.

Moreover, the Petition stressed that MDSO intends to comply with the requirements of 47 C.F.R. §§ 101.1440(d)-(e), (g). Deployment in each market will be accompanied by the required notice to DBS customers of record, and any interference perceived by them will be promptly corrected by MDSO in full compliance with the Commission's rules. To demonstrate its commitment to ensuring the interference-free co-existence of its systems with DBS, MDSO would be willing to accept a waiver conditioned upon DBS protection requirements even more stringent than those required by Section 101.1440 of the Commission's rules. Specifically, MDSO will ensure the DBS licensees have a current, toll-free number for MDSO's support services personnel, which can be given to DBS subscribers in each of MDSO's DMAs. For any DBS subscriber who experiences interference to his or her DBS reception from MDSO's operations, and who would not have experienced such interference but for MDSO's operation at the higher power levels requested in the Petition, MDSO will provide and install filters, similar to those used at certain sites in the Albuquerque testing, free of charge. Finally, if MDSO is unable to eliminate the interference caused by its higher-powered operations to any DBS customer, MDSO will reduce its power in the applicable DMA to the greater of the EIRP at which the harmful interference is eliminated or the maximum EIRP permitted by 47 C.F.R. § 101.147(p). *Cf., Aircell, Inc., supra*, at ¶ 19.

#### **IV. The Waiver Will Especially Benefit Small Markets and Rural Areas.**

As described in the Petition, MDSO's proposed configuration is particularly suited to expediting service to rural areas. By design, MDSO's higher-powered systems would involve

the placement of transmitting antennae at high elevations in more remote areas of its DMAs. The rural and exurban communities nearest those remote tower sites would receive service immediately; if any areas were to require lower-powered, “booster” transmitters, they would be the urban centers of MDSO’s DMAs. The system design that would be authorized by the waiver is perfectly suited to markets below the top 30, with relatively small cities and sparsely populated surrounding areas.

MDSO’s service areas are predominantly rural in character, and that character weighs in favor of a grant of the requested waiver. None of MDSO’s licenses serve a top 30 DMA, and only four authorize service within top 50 markets. *See, Auction of Multichannel Video Distribution and Data Service Licenses Closes, Winning Bidders Announced for Auction No. 63, Public Notice*, DA 05-3164 at Attachment A (rel. Dec. 14, 2005) (“*Auction No. 63 Closing Notice*”); *Multichannel Video Distribution and Data Service Spectrum Auction Closes, Public Notice*, DA 04-215 at Attachment A (rel. Feb. 2, 2004). The largest of MDSO’s authorized service areas, the Grand Rapids-Kalamazoo-Battle Creek DMA, covers 713,800 television households - only 0.6693% of the nation’s TV households. *See Auction of Licenses in the Multichannel Video Distribution and Data Service Rescheduled for January 14, 2004, Public Notice*, DA 03-22354 at Attachment A (rel. Aug. 28, 2003).

Similar to MDSO’s proposal, the Commission has in many contexts treated smaller markets differently from larger ones. *See, e.g., In the Matter of Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, Second Report and Order*, FCC 07-132, ¶ 35 (rel. Aug. 10, 2007) (“*700 MHz Second R&O*”) (describing rules for Commercial Services Band, including allowance of higher-powered operations in rural areas); *id.* at ¶ 357 (adopting similar rules for Public Safety licenses); *Facilitating the Provision of Spectrum-Based Services to Rural Areas*

*and Promoting Opportunities for Rural Telephone Companies To Provide Spectrum-Based Services*, 19 FCC Rcd 19078, ¶¶ 86-101 (2004) (“*Rural Order*”). See also, 47 C.F.R. §§ 73.624(d)(1) (establishing earlier DTV construction deadlines for network-affiliated stations and stations in top 30 markets); 76.505(d)(3) (allowing for local exchange carrier to obtain a controlling interest in a cable system if, *inter alia*, system is outside of the top 25 markets); 90.267(b)(2) (power limitations for certain 450-470 MHz frequencies within 80 kilometers of top 100 urban areas); 101.103 and 101.147(y)(2) (restricting number of non-GSO mobile satellite feeder link earth station complexes depending on Metropolitan Statistical Area ranking). The Commission has relied on the rural nature of affected service areas in considering waiver requests in a variety of circumstances. See, e.g., *Heart of Iowa Communications Cooperative and Iowa Telecommunications Services, Inc. d/b/a Iowa Telecom*, 21 FCC Rcd 2858, ¶¶ 19, 21 (2006) (study area waivers granted to permit applicant to devote improved services to rural areas); *Colo Telephone Co., et al.*, DA 07-33-17, ¶ 14 (Med. Bur., rel. July 23, 2007) (granting waivers of set-top box rules to petitioners who would provide all-digital service to rural areas).

More specifically, the Commission has noted that “increasing power limits in rural areas can benefit consumers in rural areas by reducing the costs of infrastructure and otherwise making the provision of spectrum-based services to rural areas more economic.” *Rural Order, supra*, at ¶ 86.<sup>8</sup> In that proceeding, the Commission increased power limits in rural areas for cellular, broadband Personal Communications Services (“PCS”), and Advanced Wireless Services (“AWS”).

Consideration of the impact of technical restrictions upon smaller markets is a long-established public policy directive. Nearly two decades ago the Commission increased the

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<sup>8</sup> MDSO notes that then-Commissioner Martin did not issue a separate statement to that order; but, Commissioners Copps and Adelstein, in partial dissents, expressed approval of the power increases adopted for cellular, PCS and AWS. 19 FCC Rcd at 19211, 19213.

height-power limits applicable to cellular services for reasons very much like those supporting MDSO's petition. *See Amendment of Parts 2 and 22 of the Commission's Rules to Permit Liberalization of Technology and Auxiliary Service Offerings in the Domestic Public Cellular Radio Telecommunications Service*, 3 FCC Rcd 7033 (1988). Said the Commission:

"We believe that numerous benefits would result from relaxing the antenna height-power restrictions. Relaxation would make it far easier for cellular operators in medium-sized to smaller markets to construct one-cell systems. Such systems would permit new service to subscribers more rapidly than is possible with multiple-cell systems. Additionally, the cost of constructing the system would be reduced, leading to lower costs for service."

*Id.* at ¶ 22.

The Commission thus has a long history of granting technical flexibility to licensees serving less populous areas. *See e.g., 700 MHz Second R&O, supra.; Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, Report and Order and Further Notice of Proposed Rulemaking*, 22 FCC Rcd 8064 ¶ 93 (2007) (allowing for higher power operations in rural areas by commercial licensees); *Amendment of the Commission's Rules for Rural Cellular Radio Service, Order on Reconsideration*, 2 FCC Rcd 3366, ¶ 15 (1987) (eliminating coverage requirements for Rural Service Areas due to concerns that such requirements "would impede our goal of providing rural cellular service to vast geographic areas"); *Amendment of the Commission's Rules for Rural Cellular Service, First Report and Order*, 60 RR 2d 1029, ¶ 31 (1986) (finding that the requirement to serve "vast territory with a scattered population and an uncertain cellular demand" necessitated relaxing height-power limitations in RSAs).

The benefits noted by the Commission in all of these proceedings apply with equal force to the higher-powered operations proposed in the Petition. The testing conducted by ACS relied on a single transmitting antenna, mounted on a tall tower at high elevation. *See Report* at 10. MDSO anticipates that most of its small, sparsely populated DMAs can be served from a single

site. See Petition at 11-12. In addition to the cost savings associated with such a configuration, because suitable elevated sites are likely to be located outside of the major population centers in the DMA, MDSO's system design contemplates that rural communities will receive the strongest signal levels and will have access to MDSO's services immediately upon commencement of operations. Concomitantly, a grant of the requested waiver would eliminate any need for MDSO to primarily focus its deployment in urban areas. A grant of the waiver would permit MDSO to meet the Commission's construction obligations, achieve "critical mass" of covered households to create a viable service, and allow small, unserved or underserved communities to receive new, advanced services at the same time those services become available to the urban centers in the DMA. MDSO is ready to begin construction in its DMAs, and in particular in the rural communities of those DMAs, immediately upon the grant of the requested waiver.

As noted, MDSO holds no licenses in the largest markets, and none of its DMAs have one percent or more of the television households in the U.S. While MDSO expresses no opinion as to whether current power levels may be appropriate in crowded urban settings such as those found in the top 10 or 20 DMAs, less densely populated areas such as those found in markets below the top 30 can be more efficiently served at much higher power without interference to DBS reception.<sup>9</sup> Albuquerque, the market in which the field tests for the Report were conducted, is the main population center of the fourth-largest DMA licensed to MDSO. No harmful interference to DBS reception was caused by MDSO's operation at even higher EIRP levels than those requested in this waiver. Not only can the small populations and relatively low population densities associated with MDSO's markets be more economically served by high-powered transmitters, but, in the unlikely event interference is caused, few DBS subscribers are likely to

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<sup>9</sup> If the Bureau finds DMAs below the top 30 (despite their small populations) larger than the type of market for which it is willing to grant relief, MDSO respectfully submits that the Commission grant the requested waiver for those markets that are outside the 50 largest DMAs.

be in the areas affected. The small number of potentially-affected subscribers will allow MDSO to respond expeditiously to any complaints or concerns to ensure that DBS viewers will continue to receive their services with the same reliability they do today.

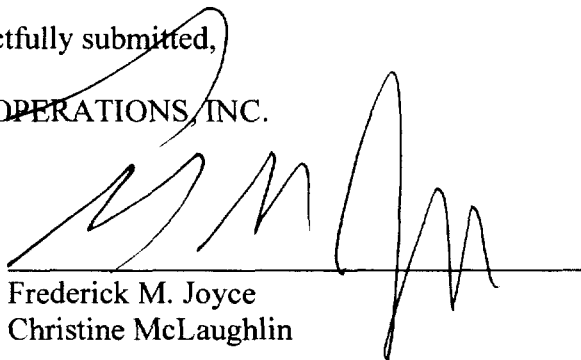
**Conclusion**

WHEREFORE, for all the reasons stated herein and in the Petition, MDSO respectfully requests that the Commission expeditiously grant the waiver requested by the Petition.

Respectfully submitted,

MDS OPERATIONS, INC.

By:

  
Frederick M. Joyce  
Christine McLaughlin

Its Attorneys

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DATE: August 29, 2007



**CERTIFICATE OF SERVICE**

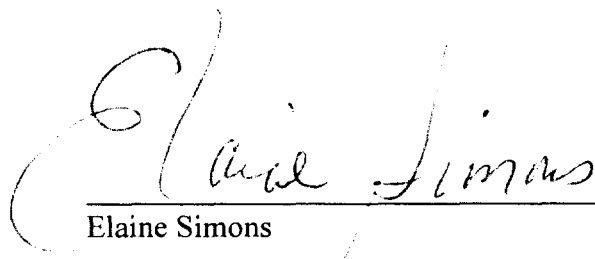
I, Elaine Simons, a legal administrative assistant in the law firm of Venable LLP, do hereby certify that on this 29<sup>th</sup> day of August, 2007, copies of the foregoing Supplement to Petition for Rule Waiver were by sent via e-mail to the following:

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\_\_\_\_\_  
Elaine Simons

8/29/07

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To: Chief, Wireless Telecommunications Bureau

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**PETITION FOR RULE WAIVER**

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May 7, 2007

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## SUMMARY

MDS Operations, Inc. (“MDSO”) respectfully requests a waiver of the provision of the Commission’s Rules which restrict power levels of Multichannel Video and Data Distribution Service (“MVDDS”) transmitters.

Tests conducted by MDSO under its recent experimental license grant demonstrate that MVDDS transmitters can readily be operated at higher power levels than those permitted by the Commission’s Rules, without causing harmful interference to any party. In particular, as the attached Report analyzing the field tests demonstrates, MVDDS stations can be operated at significantly higher power without any noticeable impact on Direct Broadcast Satellite (“DBS”) reception. Moreover, MDSO does not seek a waiver of the MVDDS-DBS coordination requirements; those requirements and MDSO’s system design guarantee that each site will be carefully engineered to avoid harmful interference.

In adopting extremely conservative power limits for MVDDS, the Commission anticipated that MVDDS licensees might require a waiver of those constraints; this Petition requests such a waiver. In addition to the lack of harm to any interested party, the requested power increases will have affirmative public interest benefits. Higher power operations will reduce the number of transmitters required, thus permitting more economical and efficient deployment of MDSO’s systems, which will expedite the provision of services to the public. Moreover, because MDSO’s system design contemplates placing those higher-powered transmitters at high elevations in rural areas so as to cover wider areas with a single transmitter, the nearby rural communities will be among the first to receive new video and data services.

The requested waiver will further the Commission’s goal of rapidly deploying new broadband services the public, especially in rural or underserved communities. MDSO respectfully submits that the requested waiver should be expeditiously granted.

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**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of	)	
	)	
MDS OPERATIONS, INC.	)	File No. _____
	)	
Petition for Waiver to Increase Effective	)	EXPEDITED ACTION
Isotropic Radiated Power Limitations	)	REQUESTED
Applicable to Multichannel Video Distribution	)	
and Data Service Stations WQAR560, <i>et al.</i>	)	<b>CORRECTED AUGUST 29, 2007</b>

To: Chief, Wireless Telecommunications Bureau

**PETITION FOR RULE WAIVER**

MDS Operations, Inc. ("MDSO"), by its attorneys and pursuant to Section 1.925 of the Commission's Rules, 47 C.F.R. ¶ 1.925, hereby requests a permanent waiver of Rule Section 101.105(a)(4) of the Commission's Rules, which imposes equivalent power flux density ("EPFD") limitations<sup>1</sup> on the Multichannel Video Distribution and Data Service ("MVDDS"); Rule Section 101.147(p), which limits Effective Isotropic Radiated Power ("EIRP") for MVDDS stations to 14 dBm per 24 MHz of spectrum; and those portions of Rule Section 101.1440 (including without limitation subsections (a)-(c)) which would prohibit operations in excess of the EPFD specified in Section 101.105(a)(4).

MDSO respectfully requests that it be granted a waiver of those Rule provisions and such other of the MVDDS technical Rules, applicable to all of its MVDDS licenses identified in the

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<sup>1</sup> As demonstrated in the technical report appended to this Petition, MDSO does not expect that the EPFD limits specified in the Rules will generally be exceeded at the EIRP levels at which MDSO seeks to operate. Nonetheless, because it is possible that the EPFD limits may be exceeded at some sites, MDSO requests a waiver of 47 C.F.R. § 101.105(a)(4) out of an abundance of caution.

foregoing FCC Form 601 application.<sup>2</sup> This request would permit MDSO to operate its transmitters at EIRP levels of up to 40 dBm per 24 MHz of spectrum<sup>3</sup> from any transmitter site in its licensed service areas, with the actual power level at each such transmitter to be determined on a site-by-site basis. MDSO requests that the waiver be applicable throughout each of the affected Designated Market Areas (“DMAs”), without regard to whether a particular DMA, or the portion thereof served by a transmitter, would be defined as “urban” or “rural.” This waiver should be granted based on the system design created by MDSO’s sister company, MDS America, Inc. (“MDSA”), which, as shown herein, allows for higher EIRP without causing any harmful interference. MDSO warrants to use only MDSA-designed and built systems in all areas subject to the waiver. Operations under the waiver would be subject to prior coordination with Direct Broadcast Satellite (“DBS”) and non-geostationary orbit fixed satellite service (“NGSO FSS”) operations in accordance with Section 101.1440(d)-(e) and 101.103(f), respectively; and subject to protection of MVDDS licensees in adjoining DMAs or incumbent public safety licensees in accordance with Section 101.1421.

In support hereof, the following is respectfully shown:

### **I. Background.**

MDSO is the holder of eighty (80) MVDDS licenses, obtained in Auction Nos. 53 and 63. Its affiliate MDSA is in the business of designing and manufacturing wireless equipment and

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<sup>2</sup> This Petition, along with the Report was filed manually through the Secretary’s Office following discussions with the Commission’s staff. The Report was too large to permit it to be successfully uploaded into the Universal Licensing System (“ULS”). MDSO will submit modification applications to its MVDDS licenses if the Commission so instructs.

<sup>3</sup> *Cf.*, Exhibit One at 30-31, 33. The highest power level referenced in the attached technical documentation was 44 dBm per 24 MHz of spectrum, at which level perceptible, although not always strongly so and not necessarily interfering, MVDDS signals were present at the receivers being tested. Out of an abundance of caution, MDSO is proposing a ceiling considerably below that level.

infrastructure. MDSA is the U.S. licensee of MDS International S.A.R.L., which has deployed numerous MVDDS systems outside of the United States.

MDSA has been a leading proponent in the U.S. of the creation of MVDDS. *See e.g.*, Comments of MDS America on Further Notice of Proposed Rule Making in ET Docket No. 98-206 (filed March 12, 2001)<sup>4</sup>; Reply Comments of MDS America, Further Notice of Proposed Rule Making in ET Docket No. 98-206 (filed April 5, 2001)<sup>5</sup>; MDS America Opposition to Various Petitions for Reconsideration, ET Docket No. 98-206 (filed April 24, 2001) (“Recon Opposition”)<sup>6</sup>; Reply of MDS America, Inc. to Oppositions to Petition for Reconsideration, ET Docket No. 98-206 (filed Sept. 13, 2002) (“Recon Reply”)<sup>7</sup>; Letter to Marlene H. Dortch from Nancy Killian Spooner, Ex Parte Presentation in ET Docket No. 98-206 (filed April 16, 2003) (the “April 16<sup>th</sup> Letter”)<sup>8</sup>; Letter to William F. Caton from Nancy Killian Spooner, Ex Parte Presentation in ET Docket No. 98-206 (filed March 13, 2002) (the “March 13 Letter”)<sup>9</sup>. In addition to the MVDDS rulemaking proceedings, MDSA also participated in the Commission’s dockets concerning the facilitation of wireless services in rural areas, promoting the deployment of high-power MVDDS in rural communities. Comments of MDS America in WT Docket No. 02-382 (filed Oct. 15, 2002) (“Rural Spectrum Comments”).<sup>10</sup>

Under an experimental license grant first issued in May of 2001, MDSA conducted studies to demonstrate to the Commission the ability to operate in MVDDS spectrum without harmful interference to other users of the subject spectrum bands. *See*, Call Sign WC2XPU (File Nos. 0095-EX-PL-2001; 0005-EX-ML-2002; 0074-EX-RR-2003).

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<sup>4</sup> Available at [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6512562118](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6512562118), *et seq.*

<sup>5</sup> Available at [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6512564295](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6512564295).

<sup>6</sup> Available at [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6512565698](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6512565698).

<sup>7</sup> Available at [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6513291570](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6513291570).

<sup>8</sup> Available at [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6514081988](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6514081988).

<sup>9</sup> Available at [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6513081697](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6513081697).

<sup>10</sup> Available at [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6515383239](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6515383239).

In 2006, MDSA was granted a second experimental authorization, under Call Sign WC9XKW, to further test the operation of MVDDS stations at power levels higher than those that would normally be permitted by Section 101.105(a)(4) of the Rules, and the impact, if any, on Direct Broadcast Satellite (“DBS”) operations. *See*, File Nos. 0738-EX-ST-2005; 0548-EX-ST-2006.

MDSA retained Dr. Bahman Badipour and his company, Analytic Consulting Services (“ACS”), to conduct testing of high-powered MVDDS operations and their “real world” impact under Call Sign WC9XKW. Dr. Badipour is one of the world’s leading experts on MVDDS technology. From September 14, 2006 through October 9, 2006, ACS conducted field tests in the Albuquerque, NM DMA. Those field tests studied the effects of MVDDS transmissions of varying power levels on the receipt of DTV signals, using DTV receive equipment of the kind in use by Albuquerque customers; three different types of receive antennae were used.

The results of those field tests are described in the ACS “Albuquerque MVDDS Test Report,” completed on January 9, 2007 (the “Report”), a copy of which is attached hereto as Exhibit One. The tests demonstrated that relatively high power operations resulted in little difference in the detection of MVDDS signals at the DBS receivers, and, detection of MVDDS signals did not correlate to actual harmful interference. Although MDSA had provided the DBS providers with FCC-required formal notice well in advance of the actual field tests, and had even given public notice of its activities in local media, MDSA did not received a single complaint from any DBS provider or customer at any time during the testing process. *See* Report at 36.

## **II. Standard For Review; Propriety of Expedited Action.**

A waiver of the Commission’s Rules is appropriate where, inter alia, “[t]he underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant



case, and that a grant of the requested waiver would be in the public interest[.]” See 47 C.F.R. § 1.925(b)(3). The grant of the requested waiver of the MVDDS technical rules is justified.

The underlying purpose of the MVDDS power limitations, which is to protect DBS receivers from harmful interference and degradation of service without “unduly constraining the deployment of MVDDS[.]” will be furthered by a grant of the requested waiver. See, e.g., *Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range; Amendment of the Commission's Rules to Authorize Subsidiary Terrestrial Use of the 12.2-12.7GHz Band by Direct Broadcast Satellite Licensees and Their Affiliates; and Applications of Broadwave USA, PDC Broadband Corporation, and Satellite Receivers, Ltd. to Provide A Fixed Service in the 12.2-12.7GHz Band*, Memorandum Opinion and Order and Second Report and Order, 17 FCC Rcd 9614, ¶¶ 68-69 (2002) (“*Second R&O*”). The Commission specifically chose “very conservative technical parameters” in establishing those limitations. *Id.* at ¶ 71. The stringent power limitations imposed by the Commission do work to constrain the deployment of MVDDS, by requiring significant MVDDS licensees to build out more transmitters due to the low-power operation of each, the Commission’s Rules significantly increase the costs of MVDDS deployment. Conversely, as demonstrated in the Report, a well-designed MVDDS system can operate at power levels well above the maximum EIRP generally permitted by the Rules without negative impact on DBS reception. Therefore, the requested waiver would not undermine any of the interests served by the Rules, and indeed, will further the Commission’s goal of allowing for the rapid, flexible deployment of MVDDS services.

Furthermore, a grant of the requested waiver will serve the public interest. In creating MVDDS, the Commission envisioned that this service would “deliver competition to other video